**P Y T H O N**

A S S I G N M E N T B O O K



C O N S U L T A D D I N C , T R A I N I N G T E A M

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**EXTRA TASK DATA STRUCTURES**

1. Create a list of given structure and get the Access list as provided below: **x=[100,200,300,400,500,[1,2,3,4,5,[10,20,30,40,50],6,7,8,9],600,700,800] Access list:** [1, 2, 3, 4]Access list: [600, 700]

**Access list:** [100, 300, 500, 600, 800]

**Access list:** [[800, 700, 600, [1, 2, 3, 4, 5, [10, 20, 30, 40, 50], 6, 7, 8, 9], 500, 400, 300, 200, 100]]

**Access list:** [10]

1. Create a list of thousand numbers using range and xrange and see the difference between each other.

(**For reference:**[**https://www.techbeamers.com/python-xrange-range/**](https://www.techbeamers.com/python-xrange-range/))

>>> xr = xrange(1, 1000, 1)

>>> type(xr)

<type 'xrange'>

>>> xr[0]

1

>>> for it in xr:

... print(it)

...

1

2

3

...

999

1. How Tuple is beneficial as compared to the list?

Lists are mutable Tuples are immutable

Lista: Implication of iterations is Time-consuming Tuple: The implication of iterations is comparatively Faster

The list is better for performing operations, such as insertion and deletion.

Tuple data type is appropriate for accessing the elements

1. Write a program in Python to iterate through the list of numbers in the range of 1,100 and print the number which is divisible by 3 and is a multiple of 2.

* lower = int(input("Enter lower range limit:"))
* upper = int(input("Enter upper range limit:"))
* for i in range(lower, upper+1):
* if((i%3==0) & (i%2==0)):
* print(i)
* #Incase we want to print all number between a range divided by any given number
* n = int(input("Enter the number to be divided by:"))
* for i in range(lower, upper+1):
* if(i%n==0):
  + - print(i)

1. Write a program in Python to reverse a string and print only the vowel alphabet if it exists in the string with their index.

def isVowel(c):

if (c == 'a' or c == 'A' or c == 'e' or

c == 'E' or c == 'i' or c == 'I' or

c == 'o' or c == 'O' or c == 'u' or c == 'U'):

return True

return False

# Function to reverse order of vowels

def reverserVowel(string):

j = 0

vowel = [0] \* len(string)

string = list(string)

# Storing the vowels separately

for i in range(len(string)):

if isVowel(string[i]):

vowel[j] = string[i]

j += 1

# Placing the vowels in the reverse

# order in the string

for i in range(len(string)):

if isVowel(string[i]):

j -= 1

string[i] = vowel[j]

return ''.join(string)

# Driver Code

if \_\_name\_\_ == "\_\_main\_\_":

string = "hello world"

print(reverserVowel(string))

1. Write a program in Python to iterate through the string “hello my name is abcde” and print the string which is having an even length.

def printWords(s):

# split the string

s = s.split(' ')

# iterate in words of string

for word in s:

# if length is even

if len(word)%2==0:

print(word)

# Driver Code

s = "i am abcde"

printWords(s)

1. Write a program in python to print the pair of numbers whose sum is equal to the result number that is let's say 8.

x=[1,2,3,4,5,6,7,8,9,-1]

1. Write a program in Python to complete the following task: Create two lists such as even\_list and odd\_list

Ask user to enter a number in the range of 1,50 and make sure if the entered number is even, append it to the even\_list and if the entered number is odd append it to the odd\_list. Keep that in mind you can only add 5 items in each list

Make sure once you enter all the 5 elements, calculate the sum of the list and return the maximum of the list.

1. Write a program to find out the occurrence of a specific character from an alphanumeric string.

**Sample input:** 12abcbacbaba344ab

**Expected output:** a=5 b=5 c=2

**NOTE:** Make sure to avoid counting the occurrence of numeric values in the string.

1. Generate and print another tuple whose values are even numbers in the given tuple (1,2,3,4,5,6,7,8,9,10).

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